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Variation of drainage parameters with height and with summer rainfall

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The agroclimatic areal values of excess winter rain, return to capacity date and end of capacity date have been analysed regionally w.r.t height. The results are:

Excess Winter Rain	(mm: h in metres)	Correl
NE England	1.54h + 121.7	(0.99)
NW England	2.33h + 237.7	(0.90)
Midlands	1.33h + 92.4	(0.83)
E & SE England	1.34h + 138	(0.47)
SW England	2.85h + 167.8	(0.78)
Wales	2.18h + 330.4	(0.76)

Return to Capacity date (number of days after Aug 31st)		
NE England	81.5 - 0.3h	(-0.96)
NW England	50.2 - 0.26h	(-0.91)
Midlands	112.1 - 0.4h	(-0.83)
E & SE England	99.7 - 0.34h	(-0.52)
SW England	83 - 0.43h	(-0.83)
Wales	36.1 - 0.1h	(-0.71)

Note: The Welsh value is suspect as no return date is defined for 3 out of the 9 areas.

End of Capacity Date (number of days after March 31st)		Correl
NE England	0.13h + 5.1	(0.96)
NW England	0.09h + 26.9	(0.88)
Midlands	0.18h - 2.5	(0.86)
E & SE England	0.17h - 1.1	(0.53)
SW England	0.24h + 2.3	(0.86)
Wales	0.09h + 31.3	(0.91)

The formulae with respect to average summer rainfall (Rs) are:

Excess Winter Rain		Correl
NE England	2.15Rs - 502	(0.94)
NW England	2.63Rs - 762	(0.99)
N Midlands	1.8Rs - 395	(0.99)
S Midlands	1.69Rs - 358	(0.99)
E England	2.98Rs - 750	(0.97)
SE England	2.72Rs - 667	(0.99)
SW England	2.9Rs - 746	(0.99)
Wales	2.49Rs - 645	(0.99)

Return to Capacity Date		Correl
NE England	202 - 0.42Rs	(-0.96)
NW England	158 - 0.29Rs	(-0.98)
N Midlands	257 - 0.54Rs	(-0.99)
S Midlands	251 - 0.52Rs	(-0.99)
E England	321 - 0.74Rs	(-0.98)
SE England	256 - 0.55Rs	(-0.99)
SW England	206 - 0.4 Rs	(-0.95)
Wales	169 - 0.3 Rs	(-0.94)
End of Capacity Date		
NE England	0.17Rs - 46	(0.96)
NW England	0.11Rs - 14	(0.99)
N Midlands	0.23Rs - 64	(0.98)
S Midlands	0.19Rs - 51	(0.98)
E England	0.37Rs - 110	(0.97)
SE England	0.27Rs - 78	(0.99)
SW England	0.21Rs - 60	(0.98)
Wales	0.15Rs - 31	(0.73)

Any comments or suggestions on this paper should be referred to the author.

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